

TRAILSIDE CONVERSATIONS

THE NATURE TRAILS AND TRAILSIDE MUSEUM
AT BEAR MOUNTAIN, N. Y.

PARTS ONE AND TWO

WILLIAM H. CARR

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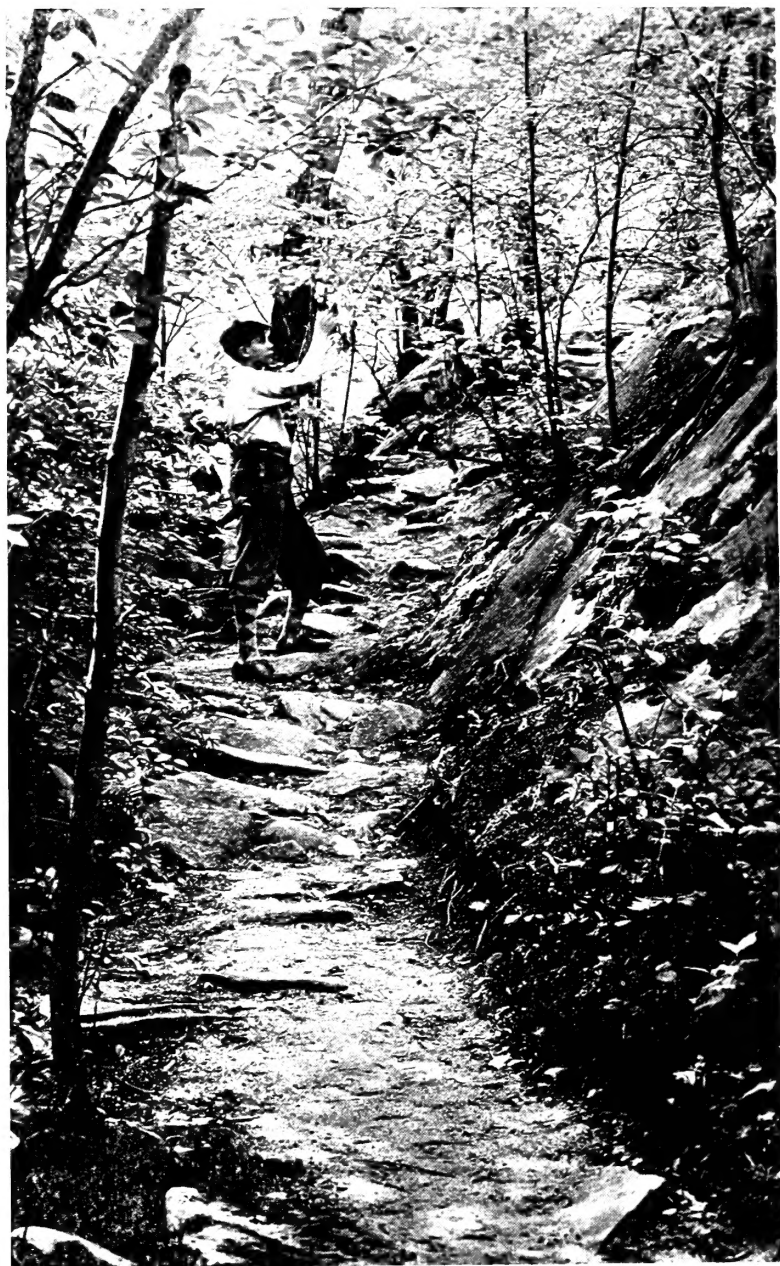
Department of Education
THE AMERICAN MUSEUM OF NATURAL HISTORY
77th Street and Central Park West
New York City

NEW SCHOOL SERVICE SERIES NUMBER FOUR

1930







Nature Leads The Way Along The Trails.

PART I

Trailside Conversations

PART II

Report for 1929

THE NATURE TRAILS AND TRAILSIDE MUSEUM

AT
BEAR MOUNTAIN—1929



WILLIAM H. CARR

ASSISTANT CURATOR, DEPARTMENT OF PUBLIC EDUCATION

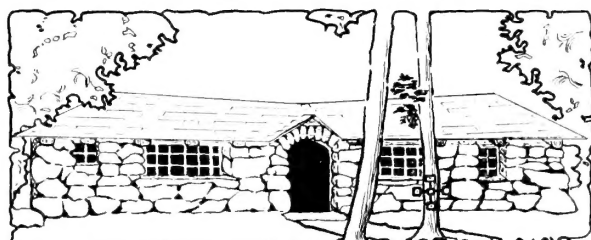
Photographs by M. P. KEANE



SCHOOL SERVICE SERIES NUMBER FOUR

NEW YORK

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BEAR MOUNTAIN TRAILSIDE MUSEUM BUILDING

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FOREWORD

The development of the Trailside Museum and of the Nature Trails at Bear Mountain, during the season of May to October, 1929, has progressed rapidly in several directions. The third year of operation has seen an increase of attendance nearly double that of 1928. The trails are now completely indicated and marked, and the museum building, constructed by the American Association of Museums under a grant from the Laura Spelman Rockefeller Memorial, is fully equipped with exhibits, laboratory and demonstration materials, nearly all of which have been made at the Trailside Workshop. Nature handicraft has proved a valuable project. Cooperation with the educational and camping department of the Interstate Park has been carried on in a more extended way than heretofore. A branch of the work, initiated this year, is that of aiding nature councillors and directors throughout the park with their individual museum and general educational problems in a very definite way. The evident increase in interest in trailside museums and in the nature trails on the part of the public is indeed most encouraging. This added interest has shown itself in many ways.

Major William A. Welch, general manager and chief engineer of the Interstate Park, has been most kind in his willingness to aid the nature program of the Trailside Museum. Miss Ruby M. Jolliffe, superintendent of camping in the Park, by her friendly assistance aided the extension work of the museum very materially. Mr. John Tampsen, chief of construction, has also been very helpful, as have the entire police force of Bear Mountain under the direction of Captain Mandago. Dr. Clyde Fisher, Curator of Visual Instruction at the American Museum, has been of much assistance by offering the valuable means of his suggestions and support generally. Many thanks are also due to Mr. Herman Sievers, Mr. Howard Cleveland, Mr. Irving Dutcher, Mr. George B. Dill, Mrs. Hazel Muller and Mr. Joseph Quinn, all of the American Museum. A complete list of all those who have aided in the undertaking would fill many pages.

The Nature Trails, the Trailside Museum, and the educational extension work, have again been directed by William H. Carr, Assistant Curator of Education at the American Museum. Mr. Carr has been assisted by his wife, Marion B. Carr. Mr. Samuel C. Yeaton, Jr., who has been with Mr. Carr throughout the season, has been of great help in many ways. Thomas Quinn, of the Museum, has also labored long and energetically toward the success of the project. Peter Keane spent two

months at the trails and completed an excellent series of photographs of the various activities. Captain Arthur Reddie, Joseph Rintelen, Arthur Killen, Robert Worthington, Leslie L. Dawson, William Wright, Robert Baker and Meredith Burch,—all stayed at the Trailside Museum at different times and aided in the work.

The trails and the Trailside Museum have been accepted by the public. Nevertheless, there still remains considerable experimentation to be done in various phases of the work. Each season will permit of expansion along certain educational lines. The building of a nature trail and of an out-of-door museum is a task that may never be described as "completed."

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TRAILSIDE CONVERSATIONS

PART ONE

ALL trails leading through the woods, along the margins of lakes, or over the tops of mountains, are, in effect, nature trails. They serve as guides to bring men, women, and children into a healthy and voluntary contact with nature. Unfortunately, however, not many of them aid in bringing nature to the people. The purpose of labeled nature trails and of trailside museums is to give thousands of visitors an opportunity to gain a real conception of the meaning of "nature mindedness" by providing them with simple, visual means of becoming better acquainted with the wonderful world in which they live.

The Nature Trails and the Trailside Museum, maintained by the American Museum of Natural History, in cooperation with the Commissioners of the Palisade Interstate Park at Bear Mountain, New York, have been visited by more than 200,000 people since 1927. Many other organizations throughout the United States have seen the value and the importance of this form of nature education and support similar projects, all with the one purpose of stimulating a more lively and lasting interest in the out-of-doors on the part of the American public.

The dwellers of cities are turning their eyes, their steps and their mental perceptions to the woods, the fields, and the streams. In ever increasing numbers they are availing themselves of the many opportunities that enable them to spend hours in the open. State and National Parks, City Parks, and Country Parks are all being used by the often mentioned, but little understood, "general public," who have learned to journey from the crowded centers of population in search of normal recreation and fresh air. The Department of Public Education, of the American Museum, has followed in the footsteps of the people of Greater New York City in their exodus to the open thus keeping pace with the times.

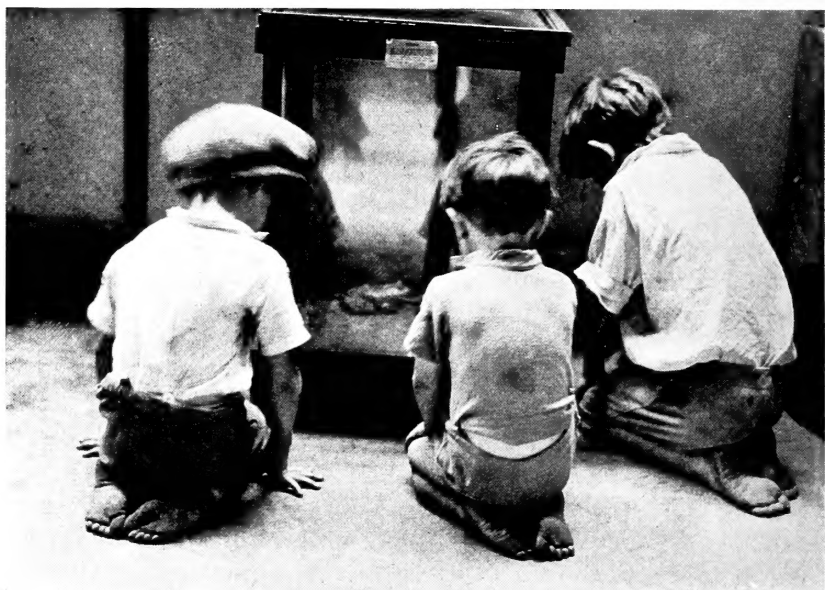
As we sit here in the Trailside Museum writing, we can look out into the large room and see many people who have come from a considerable distance to visit Bear Mountain. Many fingers, tapping on the glass of the rattlesnake cage, have aroused the captive. Its tail is vibrating rapidly and the "buzzing" may be heard everywhere in the building. Just outside the window a cicada is singing, and its lazy drone almost duplicates the sound made by the rattler.

Seven people are gazing at the the three placid bullfrogs in their large cage.

"They aren't alive, they are stuffed!" announces one man.

"Of course!" remarks another, "They are made of wax; not a very good job, either!"

At this point, one of the frogs jumps clear across the cage and lands with a thump! Five of the seven people laugh; two are silent. We are reminded of the owl in the barber shop.



Barefoot Votaries at the Bullfrog Shrine

The crowd within the museum is increasing in size, for Sunday has come to the Nature Trails on the banks of the Hudson. It is a warm afternoon in August. The rounded, green dome of Bear Mountain is silhouetted against a blue sky that is absolutely cloudless as far as one may see it up and down the river.

We walk out to the door in time to greet a perspiring man who tells us that he is from England.

"My visit to this country is very brief," he says, "but I have decided to spend one day studying this nature project. I read about it some time ago."

"I wish," he continues, "that you would be good enough to tell me all about the trails and the museum. I have followed this trail for about half a mile and have been interested in the labels and exhibits. Could you go with me?"

We have had similar requests from persons who have come from many different parts of the world, many of whom have been farther from home than this English gentleman. Of course we will go!

Our guest decides to see the museum, for it is cool and very inviting on such a warm day. He walks over to the snake exhibit first, as do the majority of persons who visit the building.

"Why do you have live snakes here?" he asks.



Glacier Exhibit in the Trailside Museum

"Well," we reply, "these snakes attract a great deal of attention. People have read and have been told so much about snakes that they are interested in them for various reasons. Here is a fine opportunity to do a good bit of educational work, and, at the same time, to utilize the reptiles as a serpentine loadstone to draw the public to other exhibits as well.

"I like the cages," says the Englishman, "but I do not like the snakes. As a matter of fact, I do not believe that many people have much affection for them. Yet, as you say, they attract one at any event."

"It is for the very reason that people do not like snakes that we have them here," we resume. "The story of popular dislike for reptiles is a long and a sad one. We realize why this dislike has spread. We also



"I like the cages," says the Englishman, "but I do not like the snakes."

know something of the value of snakes and of how perfectly inoffensive they are. That is why, by means of these labels and charts, we try to dispel a bit of that fear and also endeavor to give snakes a better reputation, a thing they are sorely in need of."

The visitor from Britain has here paused in front of the blacksnake cage where three beautiful "pilots" are resting upon the branch of a tree, like so many bands of jet rubber hose. He looks down at the label and reads it aloud.

REMARKS ABOUT THE PILOT BLACKSNAKE;
MOUNTAIN BLACKSNAKE.

Size.—The Pilot Blacksake is one of the largest snakes in this section of the country. Specimens have been captured that were over seven feet in length.

Habitat.—Although often found on rocky ledges on the sides of mountains, the Blacksake also likes the country that is well watered and that has open timber.

Speed.—Blacksnakes can travel as fast as a man can run. When alarmed, they dash through brooks, bushes and rocks at a remarkable rate of speed.

Habits.—These snakes may be easily tamed and become very gentle. They may be fed upon small rats and mice, frogs or other snakes.

DO NOT KILL THE PILOT BLACKSNAKE. IT IS ALL
TOO FAST BECOMING SCARCE.

“Quite a long label, that,” remarks the reader, “I suppose that people read it, though. I like the idea of giving a little more information than one would ordinarily expect to find.”

“Yes,” we answer. “We try to give something of a story with every label, both in here and upon the trails. The exhibit is only half the story; the label is the other half. People who are interested enough to read a label do not object to its length within reason. Of course, the wording must not be too long.”

The visitor examines several more labels that have but few words. He studies them carefully and then asks, “What governs your label writing? I would like to know more about how you compose them. I know that the idea is to give as much information in as few words as possible, but how do you decide upon the proper subject material for each sign?”

This question is one that interests us a great deal, for we have spent a number of years in an effort to discover just what the public wants to know about things out-of-doors.

“Label writing,” we tell our interrogator, “is certainly one of the most important considerations in the building of a nature trail and of a trailside museum. In the instance of snakes, we find that before we may write adequate labels and make good charts, we must first study, not only the reptiles, but the people for whom the exhibits are prepared.

The reading of accurate accounts of snakes, in books, written by reputable naturalists, is quite often necessary for the acquisition of facts. Although our own field experience with local snakes is a fair one, we find it wise always to 'check up' our own observations before telling others about them."

"That is all very good," says the listener, "but I should say that there will probably never be a book written that will answer all of the questions asked of one in relation to snakes, especially when one exhibits live specimens."



Many Groups of Leaders Visited the Trailside Museum. (This Y. M. C. A. and Y. W. C. A. Group were the guests of Mr. King in center of standing row)

"Perfectly true," we assure him, "the questions that one hears about snakes show very conclusively that here, if ever, some real facts are needed. For instance, we have given many snake lectures, using live specimens as subjects, and almost invariably the spectators will make remarks like these:

"'It wiggles so! I can't bear to touch it. I never could!'

'It gives me the creeps.'

'It's so slimy and dirty!'

'Oh! Look Mabel! Look at its stinger. Isn't that terrible!'

'Look out, Homer. Look out! All snakes are poisonous!!'

'The hoop snake. Oh, yes! I had one chase me for more than a mile, one time.'

"These common fallacies about serpents are wide spread and out-of-door museums may do much to correct them. At the conclusion of a snake lecture, it is not at all uncommon to have the attitude of the majority of the listeners completely changed. Then we hear:

"'Why, it doesn't really wriggle at all, does it!'

'I always thought that they were slimy, but now I can see that they aren't.



Woodland Babies, "Sachet" and "Cottontail"

'How pretty it is! It has a regular color pattern, hasn't it!'

'How often do you give it a drink?'

'Mother, may I hold it for a little while?'

The Englishman is interested.

"I suppose," he says, "that the most satisfactory methods of toppling over this snake fear and of doing away with a certain amount of ignorance is to lecture with the reptile; to give actual demonstrations with them?"

"Demonstrations are very valuable," we answer, "but it is not always possible to give them, and so we have to depend upon the labels, to

a large extent, to solve the problem. This 'Fact and Fiction' chart is read by many people. Some of the comments made by the readers show that the chart has done its bit in correcting popular misbelief about snakes."

We leave the snakes and wander over toward a series of charts that are standing in individual frames upon the redwood table. On the way we have paused to look at the aquarium table, the 'current event' blackboard, and the model of a beaver pond. The British gentleman has his notebook in his hand and is copying various labels as he walks. We have just discovered that he plans to operate a similar nature museum in England. Like many of his countrymen, he is a bit taciturn and does not tell us about his plans until he has been with us for some time. He now tucks his book away in a side pocket, carefully replaces his pencil, point up, in a breast pocket, and resumes his questioning.

"I have read," he says, "that you did not like to exhibit mounted specimens of any sort in an out-of-door building. They would be very attractive here but I can see that there would be no room for them. After all, the charts, models and living animals are much more in keeping with a building like this one. It isn't a museum at all, is it! Could you not think of a better name than 'museum'?"

"We have tried to," we reply, "we have earnestly tried to think of a name for the building, for, as you have observed, it is not a museum, but a part of the trail. 'Trailside Museum' seems to answer the purpose."

The notebook has appeared, again, and the busy pencil is copying the subject material upon the charts on the table. These charts have been copied by many people this year, for they have to do with an idea as well as with mere nature facts. There are seven charts in the series. The title upon the sign that hangs above them all is ENEMIES. The six charts tell of the 'enemies' of birds, mammals, reptiles, fish and frogs and toads. In the center of the table is a large label that reads:

THE IDEA

Upon each of the 'ENEMY' charts, you will notice that *MAN* is the principal offender in every case. *MAN*, with his civilization, has invaded the forests and the plains alike. He has driven the wild life from the great majority of its former retreats. In order to preserve the animals of today, it becomes our duty and privilege to provide sanctuaries for them. Above all, we must teach the people of America to protect their priceless heritage, the wonderful natural life, both plant and animal that should be theirs for all eternity.

Once more the pencil rests, and the writer takes advantage of the bench in front of the table. We sit by his side as he says, "Tell me about the charts in the building. I would like to know how they are made and how one would go about making new ones. It would appear that, although the charts are good, they would nevertheless have to be changed from time to time."

"Now you have touched another subject to which we have given much thought," we tell our visitor. "Charts in a small room like this one, have indeed, to be changed frequently. Many of them follow the seasons. If they are colorful and attractive they will interest many people. In making all charts we try to remember that we must take a bit of a lesson from the all powerful advertising people of today, who have



Mineral Exhibit, Prepared in the Trailside Workshop, and Lent to Camps.

brought their art, if you would call it that, into the realm of 'big business.' These professional advertisers have learned how to approach the public, how to catch and hold their attention, and how to make space count to its fullest measure. If we would attract the public, we must also study their likes and dislikes and plan our charts accordingly."

"These advertisers are great fellows," the Englishman agrees; "they certainly do know how to catch the eye with their slogans and captions. They are able to describe some inconsequential little product

in such a manner that fortunes are soon made for the producers. You spoke about the 'likes and dislikes' of the people. How do you learn what these are?"

"In the first place," we return, "we must know the things that the public expect to see. We know that they usually have the same general ideas and the identical questions to ask in relation to nature. We therefore cater to these 'whims' by first answering these questions, the questions they either would ask or would like to ask. We find that in preparing our charts to illustrate various phases of nature, we must be able to satisfy the original queries and then lead our information into directed lines of thought. In other words, these charts must start upon the 'ground floor' and work up. As we have said before, what one wishes the public to know, and what they *want* to know are two different things."

"Very true," says the British guest, "but to be more specific, tell me how you came to make that life-history chart of mammals over there."

"Well," we explain, "it is very evident that the life history of mammals is a fascinating subject. As you may see, photographs of young mammals are always appealing. Notice how the woman who is looking at the chart reacts to the picture of the baby rabbit in the little girl's hands. She thinks it is 'real cute'."

"We know that this is about what she and the great majority of our visitors would think about the picture. The appealing side of any animal is a good thing with which to start interest. It is wise, however, to discover in just what way the appeal is made. If a picture of a baby raccoon, feeding from a human baby's nursing bottle, arouses a smile upon the face of the beholder, one may make a fairly safe conclusion that the nursing bottle has a great deal to do with it."

"It has something to do with the helplessness of all babies, don't you think?" asks the guest. "I believe that people often exhibit what one might call a 'superior approval' when looking at these pictures of baby animals."

"You are right," we agree. "That is why, in the instance of the young raccoon, with its milk bottle, we may readily tell of the fact that one of the characteristic traits of all mammals in the vicinity, has to do with the nursing of the mother and the drinking of milk. This fact, in turn, may very well lead to other habits of land mammals, such as walking on four feet, and so on, until at last you have led the visitor from the baby with its bottle to perhaps the adult raccoon washing its food in a stream or peeking from its tree-trunk home."

"You remind me of a little jingle about mammals that I saw once," laughed the Englishman. "It went something like this:

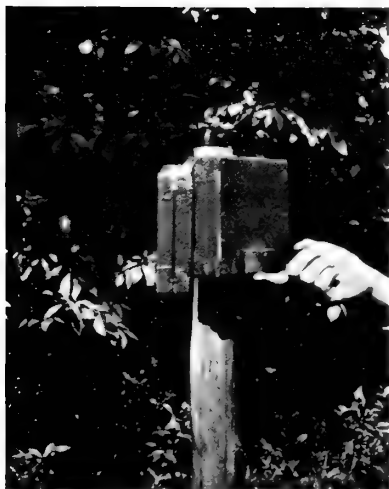
"Birds have feathers to fly through the air,
Reptiles have scales in part,
Mammals are more or less covered with hair,
And suckle their young at the start.'"

"*There* is a good rhyme for you! Why not put that in a mammal chart?" he asks.



The Wood Frog Away From Home For a Brief Time. How Many Do You See Here? There are Three in Sight.

The afternoon is going quite rapidly and we have not yet visited the nature trails. We remind the note-maker of this and he is at once anxious to see the "hidden label trail." We walk up towards Bear Mountain Bridge until we come to a small, open field where this particular trail begins. Our visitor here examines the covered signs and walks off down the trail. We have to say good-bye, for we must return to the museum. He promises to stop by and see us again on his way to the boat which will bear him back to New York.



Hidden Labels

Outside of the museum building, there is an easel upon which are placed photographic enlargements of the moon in its various phases. A group of children has gathered about the pictures. One of the eldest is reading the explanatory labels aloud. We walk quietly up and listen for a few minutes.

A little girl is much interested in one particular picture that shows "mountains of the moon."

"I didn't know that the moon had mountains," she says. "Do people on the moon have to climb those mountains?"

"No," answers the older girl.

"this sign says that there are no people on the moon. There's no atmosphere for them to breathe. Nobody could live there."

"I don't see why not," persists the little questioner. "Anyway, my mother said there were people up there and she knows!"

"Was your mother ever on the moon?" asks another girl with a smile.

"No, neither was yours! But she told me once, that the 'man in the moon' was made by the houses of people up there."

At this point in the lunar conversation we walk over and talk to the children. We explain that there are no houses on the moon, and that the "Old Man" is represented by the mountains. The little girl is still loyal to her mother, however, and wants to know what we mean by "atmosphere." She is about twelve years old and has a very keen expression about her



Reading The Hidden Label

eyes. We lead her to a chart that exhibits various types of clouds. We tell something of the story of what we mean by atmosphere. When we have finished, our young listener says:

"Oh! You mean 'air' when you say atmosphere. Why didn't you say 'air' on that sign under the picture of the moon? Of course I know that people can't live without air! Maybe mother didn't know that there wasn't any air on the moon!"

We go out and remove the "atmosphere." The sign now reads "air." We stand corrected!



"I Didn't Know That The Moon Had Mountains."

As we enter the building, a woman approaches us and says: "Won't you please come here and help this little turtle to its feet? It is turned upon its back and I am afraid that it can't turn over without some assistance!"

Soon the tiny wood tortoise is happy, for we have carried out the woman's request. The mere fact that she is enough interested in turtles to wish them comfort pleases us.

In front of the live salamander exhibit a large group of visitors are listening to one man who apparently is getting a good deal of enjoyment from being listened to. He is of the type that likes an audience and will talk as long as he can hold them, never showing any particular regard for truth in his statements. We join the crowd and listen too, for a few moments.

"These lizards," he was saying, "are the kind you drink in spring water sometimes. My father drank one once and the doctor told him that it would live in his stomach for a long time and finally kill him."



A Turtle Pen at a Park Museum.

A shudder passes through the feminine portion of the group and the orator observing this, continues with relish.

"Yes, the doctor made him get rid of the lizard right away. These lizards are poisonous."

"Why didn't the lizard poison your father?", asks one woman.

"Oh," replies the man, "the lizard lives by the spring just waiting for a chance to get into somebody's stomach. It wants to get there and live. You don't suppose it would poison anybody unless it had to, do you?"

There is no answer to this question and so we work our way to the front and spend the next few minutes in correcting a few of the man's

statements, taking pains not to embarrass him by so doing. We then read the sign in front of the exhibit which says:

SALAMANDERS ARE NOT LIZARDS

Lizards have scales and belong to the reptile family. Salamanders are amphibians and are very close relations of frogs and toads. They have no scales. Their bodies are covered with a somewhat 'slimy' naked skin as you may observe by looking closely.

"What do you mean by 'amphibian'?" asks the deposed narrator. We read another label that answers his question.

WHY AMPHIBIAN?

Some *aeroplanes* are able to descend either upon land or water. They are called *Amphibian planes*. Salamanders, during various stages of their lives live both in water and upon the land. They too are amphibians!

We then tell of the fact that salamanders do not have poisonous bites, and at last convince the man that his father's doctor must have been mistaken. We tell him that it would be as much to the salamander's advantage to stay far from human stomachs as it would be to his father to avoid "lizard doctors."

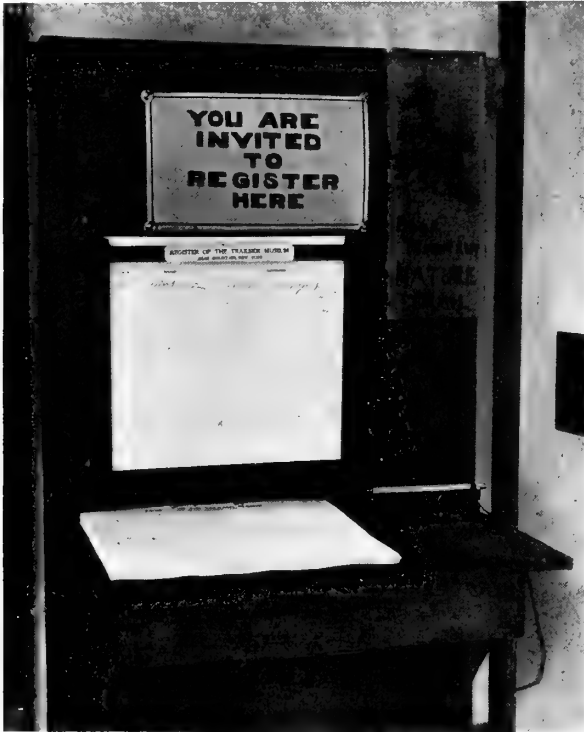
Back in the office once more we sit down at the desk and review some of the events of the afternoon. Indeed, all of our experiences have been "events" that are valuable to us in many ways. They consist of bits of enlightening conversations with the public and observations that we have made as to the relative usefulness of certain exhibits. New ideas, new methods, and thus general progress are all the direct result of our contact with the people. In our efforts to discover in what channels their interests lie we have but to mingle with the crowd, listen to their remarks, and study their actions.

As it is our aim to provide a definite educational activity for our visitors, we must first place ourselves on a plane with them and build our work from their viewpoint, as well as our own. Books do not teach



A Crow Talk Beside The Trail

us these things half so well as do the people for whom and about whom the books have been written. A wealth of stimulating experiences await the nature museum director who learns to be one with his public. If we were to be aloof, to plan our exhibits with only our own ideas for background materials, then would our guests be disappointed. As a



Some People Like to Sign Their Names and Others Do Not. The Register is Not An Accurate Means of Recording The Number of Visitors

matter of fact, the Bear Mountain Nature Trails and the Trailside Museum have been planned as much by the public as by the actual builders.

This morning we walked over the Nature Trail with a well-known scientist from a distant university. It was perfectly obvious to us that he did not approve of several of the labels upon trees and plants along the path. We bided our time and then asked him directly to what he objected.

"Why," said he, "They are too simple! You have printed things upon these signs that even children know. It occurs to me that your visitors would want you to give them a little more credit for their intelligence. My little daughter would be amused by some of these labels."

We considered all this as a distinct compliment to the trails, for we realized that for one university professor and one university professor's daughter, there would be ten thousand people who would not be insulted by the labels that our friend objected to. We knew his life had been among students; that he had, in all probability, never spent many hours, week in and week out, with the type of persons to



Girls Prove Good Carpenters Too. Making Animal Cages At The Trailside Workshop.

whom a college education is utterly unknown. Of course, we try to satisfy our many true nature students, as well, but we shall never be content unless the majority of our labels and exhibits are arranged for the majority of our visitors.

Informal, yet not undignified methods of teaching nature out-of-doors seem to be the most desirable. A direct personal appeal, made by an honest, straightforward means of approach and by the giving of absolutely correct information at all times, seems to be the system by which nature interests may best be shared.

When a casual interest is developed into an earnest desire by means of open device, to know more, then will good work have been accomplished. We are abruptly interrupted at this point in our thoughts by a small boy who leans on the sill of the "dutch door" and announces:

"Mister, the door to the skunk cage is open! I just saw two skunks run away into the woods!"

We rush down to the cage but all to no purpose, for the two black and white animals have indeed fled to the shelter of the woods from which they came. Looking a bit sadly at the broken cage door, we reflect that here is one device that proved to be too "open"!



A Talk On Historical Point

"Too bad," sympathizes the boy who has accompanied us.

"Maybe you'll get some more skunks soon. I am staying at a camp. I'll see if I can't catch one. They come into the cook house every night."

We thank the young camper for his interest and then go in search of a hammer. Even though the animals have gone, the cage must be repaired. Nature Trail work is never done. There is ever something to be improved, even though it be only a skunk cage!

The boy follows us.

"Mister," he says, "I caught three of those things you call 'salamanders.' I have no place to keep them. What can I do?"

"That is very easy," we tell him. "Come with us to the workshop. We will give you some wood, wire and tools, and show you how to make a cage just like the one you saw in the Trailside Museum. Many boys, yes, and girls too, have built cages at our Trailside Workshop, this summer."

"That's great!" exclaims our companion. "I'll make a cage and take it to camp where all the fellows can see it! Can you tell me how to take care of them, too?"

We have reached the workshop by this time and all of our young friend's questions have been answered. Soon he is busy upon the construction of his cage. We leave him to his work and return to mend the skunk cage. The boy's happy face goes with us.

There is great satisfaction in giving to others that practical sort of aid that results in things actually accomplished. If we have been able to create in the mind of this boy something of an abiding interest in nature, then will our day have been well spent.

THE BEAR MOUNTAIN NATURE TRAILS AND TRAILSIDE MUSEUM

PART TWO REPORT FOR 1929

The small building, built of glacial boulders and placed in the woods on the banks of the Hudson at Bear Mountain, is known to thousands of people as the "Trailside Museum." It is in the center of the nature trail area. All of the labeled trails lead to its doors and many of the out-of-door exhibits are further explained and amplified within the stone structure. The third year of operation has brought about many changes, many additions and improvements in the Trailside Museum.



The Arrow Points The Way

The relief model of the Nature Trail area is the first thing that one sees upon entering the building. It shows, in raised contours, the different trails, the points of interest, and the directions the visitor should take in order to see various natural objects in the immediate region. This large scale model has proved to

The Trailside Museum

Relief Map

be of considerable value, for it not only gives specific directions as to the location of certain "natural history events," but it also serves as a general guide to the region and teaches the visitor something of the importance of being able to read contour maps correctly.

Indoor exhibits of living animals have this year been greatly increased, both as to numbers of species exhibited and as to the interesting species cared for. A complete equipment of new cages and other physical means of exhibiting the creatures to the best advantage has been designed and made in the Trailside Workshop. Some fifty of these new cages have been in use. At one time the Trailside Museum had thirteen species of local snakes, all properly housed. In connection with the exhibit of live animals, the following chart was posted:

"FOOD IS IMPORTANT! NOT ONLY TO US BUT TO ALL ANIMALS. THIS IS A LIST OF CREATURES THAT WE HAVE KEPT, WITH THE FOOD THAT THEY HAVE ACCEPTED FROM US."

<i>Pickereel Frog</i>	Chopped Beef and Meat Loaf
Earthworms	Tadpoles and Newts
Pickereel Frogs	<i>Hog-nosed Snake</i>
Tadpoles	Toads
Salamanders	Green and Pickereel Frogs
Newts	Tadpoles and Newts
Spring Peepers	<i>Blue-tailed Lizard</i>
Beetles	Flies and Crickets
Grubs	<i>Crayfish</i>
Flies and Ants	Earthworms
<i>Tree Frog</i>	<i>White-footed Mice</i>
Flies and Ants	Bird Seed
Grasshoppers	Bread
Katydid	Meat
Caterpillars	Potatoes
<i>Box Turtle</i>	<i>Pilot Black Snake</i>
Beetles	Mice and Chipmunks
Earthworms	<i>Bullfrog</i>
Meat Loaf	Prionid and Other Beetles
Chopped Beef	Earthworms
<i>Muhlenberg Turtle</i>	Tadpoles
Earthworms	Green and Pickereel Frogs
Pickereel Frogs	American Toad
Spring Peepers	Salamanders
Beetles, Flies, and Ants	Newts and Efts
Grasshoppers and Crickets	

- Dragon-fly
 (Larvæ and Adult)
 Crayfish
 Grasshoppers and Crickets
 Bumble-bees
 Water-boatmen
 Backswimmers
 Flies
 Butterflies and Moths
 Spring Peepers
 Caterpillars
 Ants
 Different Larvæ and Grubs
 Garter, Ribbon and Water Snakes
 Mice
Green Frog
 Earthworms
 Tadpoles
 Spring Peepers
 Pickerel Frogs
 Beetles
 Moths
 Flies and Ants
 Newts
 Salamanders
Garter Snake
 Garter Snakes
 Frogs
Crows
 Bread
 Crackers
 Meat
 Milk
 Eggs
 Insects
Dragon-Fly Larvæ
 Tadpoles of Frogs
 Salamanders and Newts
Backswimmers
 Tadpoles of Frogs
 Newts and Salamanders
Snapping Turtles, Wood, Musk and Spotted
 Earthworms and Meat Loaf
 Chopped Beef
- American and Fowler's Toad*
 Ants and Flies
 Caterpillars
 Grasshoppers
 Beetles
 Earthworms
 Tree Hoppers
 Spiders
 Grubs
 Hornets and Bees
 Many other Insects
 Whirligigs
Skunk
 Bread
 Meat
 Milk
 Crackers
 Eggs
 Beetles
 Grasshoppers
 Crickets and Earthworms
Painted Turtle
 Earthworms
 Chopped Beef
 Meat Loaf
Giant Water Beetle
 Flies
 Tadpoles
 Small Fish
 Water Newts
 Water Beetles
Ribbon Snake
 Garter Snakes
 Frogs
Salamanders
 Earthworms and Grubs
Tiger Beetles
 Flies
Green Snake
 Grasshoppers
 Crickets
 Caterpillars

This chart tells something of the care of animals, as well as listing the species exhibited. People, especially campers, are interested in keeping some live creatures. They have many questions to ask in relation to this subject. Our exhibits were planned accordingly, not only to show and to describe animals, but also to indicate certain ones that could be easily kept, and to further explain the making of suitable cages. We advised that rare species be unmolested and that common animals be kept only under the proper conditions.

The exhibit of microscopes, described in previous reports, continued to be the most popular educational feature in the museum building.

Microscopes

Indeed, the floor in front of the microscope table was quite worn by the feet of visitors, many of whom were permitted for the first time actually to use a microscope, to study its operation, and thus to view the marvels of microscopic life.

A new exhibit that showed "something to do with leaves" attracted many visitors, both adults and children. The only glass case in the building was used for this exhibit. Here were shown the various

Botanical

Exhibit

steps by which different kinds of impressions could be taken of leaves. The following "direction sheet" was one that we prepared for the use of interested persons.

"Botanical exhibits in a Trailside Museum usually are of the type that explain details of plants that have previously been observed by the visitor, out-of-doors along the nature trail. Microscopic slides of flower parts, demonstrations of root action and similar visual aids that amplify the information given upon out-of-door labels, all have their important places indoors. Often the adult, as well as the junior museum visitor, would like to know of something that they themselves could do to become familiar with plants. Many would also like to create something, in connection with plant study, that would serve as a more or less permanent reminder of activities well spent. The making of leaf collections is a project that will satisfy many a nature souvenir hunter."

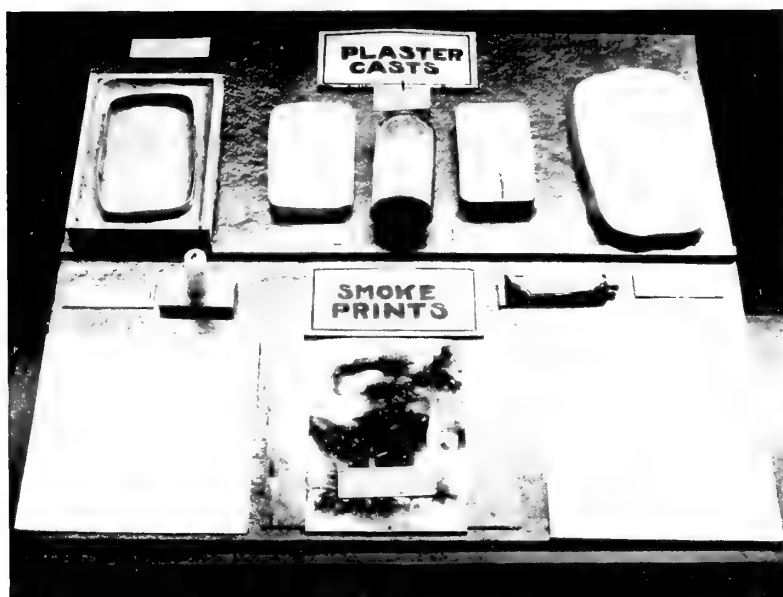
"An exhibit of various kinds of mechanical impressions of leaves will be of interest in any Trailside Museum. This exhibit should not merely show the results, the finished products. It should also show, step by step, the various things that are necessary for the completion of each type of leaf production displayed."

"SOMETHING TO DO WITH LEAVES"

"The most simple method is perhaps the one that requires only a large ink pad, of the sort used for rubber stamps, some paper, and the



"Some Things To Do With Leaves"



Other Things To Do With Leaves

**The Stamp
Pad Print**

leaf to be copied. It is first necessary to select as nearly perfect a leaf as possible of the kind desired. Place the leaf, with its lower or under side down, gently upon the ink pad and with a piece of paper, rub it to cover the entire under-surface with ink. Remove the leaf and place it once more, lower side down upon the paper that is to receive the impression. Once more place a piece of paper over the leaf and rub it very gently with the finger tips, making sure to cover the edges and also taking pains not to allow the leaf to slip. After having experimented with several leaves, the resulting print will



Chestnut Blight Exhibit Showing the Stump and New Sprouts

be very good, and when dried, will last for a long time. The finished print should show clearly the veins and the margins of the specimen.

(Ten other types of leaf reproductions were here described.)

Regardless of what types of reproduction one may make of leaves, a label should invariably be included, for without a label the exhibit will lose more than half of its interest. Each label should tell the name of the plant, the location, and the collector."

**Labeling
the Leaf
Reproductions**

Various types of leaf reproductions were shown in different stages of the work, and the completed



Building a Nature Trail at The Star Lake Camp of the Salvation Army



Writing a Label

"products" were then placed where all could see them. Many were the inquiries that we had about these exhibits.

We have noticed that the average time spent by visitors in the Trailside Museum is about twenty-five minutes. Although the building is but sixty feet long and twenty feet wide, there are enough objects within it to hold the interest of spectators for a considerable period of time. It was not at all uncommon to have some of the guests spend an hour or more studying the various exhibits. One sign near the entrance door read:

If you look carefully about you will discover many things that
your eyes failed to see when you first entered the Trailside
Museum.

This year the "Return Trail," the "Swamp Trail," and the "Hidden Label Trail" were completely marked. The labels upon the historical trail were all replaced and sturdy chestnut posts were firmly fixed so that this particular trail would be virtually permanent. Wooden backs were tacked to all signs in this series, insuring the metal labels against bending, and consequently against the cracking of the paint.

The Nature Trails New exhibits along the trails included the insect table and the turtle pens. The insect table was a light affair made of red cedar. A small, sloping roof protected the insect cases from the rain. Various types of insects, such as beetles, crickets, wasps, bees and grasshoppers, were kept in small glass-fronted cages upon this table. The entire exhibit was placed in a shady spot near the ant hill and the "insect fence."

The turtle pen was placed half in and half out of a running brook upon the swamp trail. The pen was about eight feet square and had a small runway that led beneath the water surface for the comfort and well-being of water-loving turtles. Dry land was provided for the box turtles and wood tortoises. A revolving sign completed this out-of-door exhibit.

Many new labels were added to the entire trail system. All damaged labels were replaced almost as rapidly as they became scratched or otherwise mutilated. This work entailed long hours of label composing and printing. A complete card-index of all labels, both indoor and out, was

kept up to date, thus greatly facilitating both the printing and placing of labels.

The trail work was continued in ways described in "Signs Along The Trail" and in "Blazing Nature's Trail." The zinc labels still proved to be most satisfactory. A heavier grade of galvanized wire was used, thus fastening the signs more securely to the objects they described.



"From Leaves to Clay." Cross Section of Soil, Demonstrated Beside The Trail.

The new building at the end of the trail, near The Bear Mountain Bridge Toll House, designated as the "Trailside Workshop," has given excellent service to the entire nature project. It served as living quarters for four people, as a workshop for the trails and the museum, and as a nature laboratory for more than one hundred nature councillors and directors in the camps of the Interstate Park.

During the early part of the camping season, announcement was made through Miss Ruby M. Jolliffe, of the Park Staff, to many of the



Sheltered Historical Label

proved to be of considerable value in the nature educational life of the individual camps. As a direct result of this activity, at least five of the camps have planned to "carry on" in a much larger way during the next season.

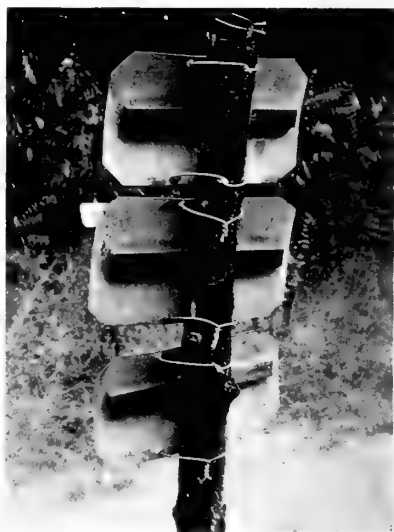
It was our privilege during the camping season of 1929 to cooperate with the camping department of the Interstate Park to a much

**Other Phases of
Cooperation with
the Interstate
Park Camping
Department**

greater extent than we have been able to do heretofore. This was largely made possible by the automobile supplied to the nature trail by the Department of Public Education of the American Museum. This automobile traveled more than 5,000 miles, playing an important part in bringing nature education to the 90,000 children who visited the camps during July and August.

camp directors in the Park area, that we of the Trailside Museum would be glad to give instruction to nature teachers on the care of their captive animals. The teachers responded at once, and during July and August, fifteen bird houses, eighty-two animal cages, eight museum models, and three museum aquariums were made by the campers in the Trailside Workshop. The American Museum furnished transportation, materials, tools and instruction for all of this work.

The result of this service was that many camps which could not provide museum equipment were given exhibit materials that soon



Method of Strengthening Small Labels

The four regional museums in the principal camping centers of the Park received a major share of our attention. Individual camps were also served. This work consisted of lending slides and loan material and of giving lectures. Although as much time as possible was given to this activity, we feel that we have merely begun upon the work. The opportunities for teaching nature in the camps of the Interstate Park are almost without limit. This great camping area, the largest in the world, has been the scene of much pioneering work in nature study. The four directors of the regional museums, employed by the Park Commission-



The Twin Lake Museum of the Interstate Park. There are Four Nature Buildings of This Type in the Park Areas

ers, have accomplished a splendid piece of work this year. Miss Ruby M. Jolliffe supervises this branch of Park activity; and it was through her good offices and through the friendly cooperation given by Mr. Charles Williams, Mr. Julian P. Hickok, Miss Anna Lutz, and Miss Agnes Kelly that we were able to do our part in helping with the various nature projects.

There is no inspiration like that of working with persons who are truly interested in the subject at hand. We of the Bear Mountain Trailside Museum are fortunate indeed to come in frequent contact with the camping department of the Interstate Park.



Purple Loosestrife Tells A Story.



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FOR THE PEOPLE

FOR EDUCATION

FOR SCIENCE